

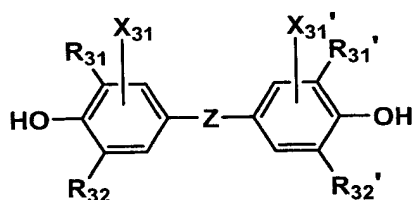
What is claimed is:

1. A photothermographic material comprising on a support a light-sensitive layer containing a light-insensitive silver salt of an aliphatic carboxylic acid and light-sensitive silver halide grains, a reducing agent for silver ions and a binder, wherein the photothermographic material further comprises a compound represented by the following formula (1), and the photothermographic material meets the following requirement:

$$S_B/S_A \leq 0.2$$

wherein S_A represents a sensitivity obtained when exposed and thermally developed, and S_B represents a sensitivity obtained when subjected to a heat treatment at 110 °C for 15 sec., then, exposed and thermally developed;

formula (1)



wherein Z is -S- or -C(R₃₃)(R₃₃')-, in which R₃₃ and R₃₃' are each a hydrogen atom or a substituent; R₃₁, R₃₂, R₃₁' and R₃₂'

are each a substituent; X_{31} and X_{31}' are each a hydrogen atom or a substituent.

2. The photothermographic material of claim 1, wherein in formula (1), R_{33} and R_{33}' are each a hydrogen atom, or an alkyl or cycloalkyl group.

3. The photothermographic material of claim 1, wherein in formula (1), at least one of R_{33} and R_{33}' is a hydrogen atom and the other one is a hydrogen atom, or an alkyl or cycloalkyl group.

4. The photothermographic material of claim 1, wherein in formula (1), R_{31} , R_{32} , R_{31}' and R_{32}' are each an alkyl group, alkenyl group, alkynyl group, cycloalkyl group, cycloalkenyl group, aryl group or heterocyclic group.

5. The photothermographic material of claim 1, wherein the silver halide grains each internally contain an electron trapping dopant.

6. The photothermographic material of claim 5, wherein the electron trapping dopant is contained in an amount of 1×10^{-8} to 1×10^{-1} mol per mol of silver.

7. The photothermographic material of claim 5, wherein the electron trapping dopant is selected from the group consisting of metal ions except for silver ion and their salts or complexes, chalcogens, chalcogen- or nitrogen-containing compounds, and rare earth ions and their complexes..

8. The photothermographic material of claim 7, wherein the electron trapping dopant is selected from the group consisting of lead ion, bismuth ion, gold ion and their salts.

9. The photothermographic material of claim 7, wherein the electron trapping dopant is a complex of a transition metal ion selected from the group consisting of W, Fe, Co, Ni, Cu, Ru, Rh, Pd, Os, Ir and Pt.

10. The photothermographic material of claim 1, wherein the silver halide grains are silver bromide or silver iodobromide.

11. The photothermographic material of claim 1, wherein grains having a grain size of 0.04 to 0.07 μm account for at least 50% by weight of the silver halide grains, based on silver.

12. The photothermographic material of claim 1, wherein the aliphatic carboxylic acid exhibits a melting point of 70 to 90 $^{\circ}\text{C}$.

13. The photothermographic material of claim 1, wherein the silver salt of an aliphatic carboxylic acid is comprised of grains having an average equivalent circular diameter of 0.05 to 0.8 μm and an average thickness of 0.005 to 0.07 μm .